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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,635

05/02/2005

Thomas Kuegler

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12/28/2006

EXAMINER

GORMAN, DARREN W

ART UNIT

PAPER NUMBER

3752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/28/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/533,635

Applicant(s)

KUEGLER ET AL.

Examiner

Darren W. Gorman

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 7, 9 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 8, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 10-13 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/02/05 & 10/07/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species Group III in the reply filed on November 8, 2006 is acknowledged. The traversal is on the ground(s) that claim 1 recites the same corresponding special technical features, which are provided in all of the species, and since the Examiner did not provide any prior art references to show specifically that the prior art anticipates or makes obvious the present invention as defined in claim 1, then the restriction between the identified species should be withdrawn. This is not found persuasive because the device recited in Applicant's generic claim 1 is clearly anticipated by at least the prior art reference to Nylund (US Patent No. 5,199,398), which was cited on Applicant's IDS filed May 2, 2005. It is also noted that Applicant, on an IDS filed October 7, 2005, cited European Patent Application Publication (0520659), which corresponds to the aforementioned US Patent to Nylund. Since Applicant was aware of these references and their applicability to the instant claims at the time the Restriction Requirement was received by Applicant, then Applicant was aware that the technical features of the device recited in claim 1 represents a known fuel injection arrangement that does not define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

Specifically, Nylund shows a fuel injection valve (see Figures 1-3) having a valve body (2) in which a bore is embodied that is defined (on its end toward the combustion chamber of an internal combustion engine) by a valve seat (11a, 11b) at which at least one injection opening (5) originates, and having a hollow valve needle (3), which is located longitudinally displaceably in

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the bore and which has a valve sealing face on its end oriented toward the valve seat, wherein a first sealing region (10b) and a second sealing region (10a) are embodied on the valve sealing face (see Figures 2 and 3), and the hollow valve needle cooperates with the valve seat in such a way that upon contact of the hollow valve needle with the valve seat, the first sealing region upstream of the at least one injection opening and the second sealing region downstream of that injection opening effect sealing between the valve sealing face and the valve seat (see column 2, line 61 through column 3, line 4).

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2-4, 7, 9 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 8, 2006.

Information Disclosure Statement

3. The IDS forms filed on May 2, 2005 and October 7, 2005 are hereby acknowledged and have been placed of record. Please find attached a signed and initialed copy of each PTO 1449.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference number

“5”, shown in Figure 1 and reference number “25” shown in Figure 2 are not found in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are further objected to because the lead line for reference number “3” in Figure 1 does not appear to indicate a “bore” embodied in the “valve body (1)” as disclosed. The lead line for reference number “3” appears to indicate a member that is coupled to the exterior of the valve body.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Minor Claim Suggestions By Examiner

6. The use of reference numbers in the claims in the instant application is confusing because, in at least one occurrence, Applicant's reference numbers are inconsistent from claim to claim. For example, in claim 1, reference numbers "(32; 46; 48)" designate the "second sealing region", however in claim 4, reference numbers "(31; 34)" designate the "second sealing region". Applicant is encouraged to amend the reference numbers in the claims for consistency, or, since reference numbers in the claims cannot be used to further limit recitations in the claims, Applicant is encouraged to delete all reference numbers from the claims.

Claim Objections

7. Claim 13 is objected to because of the following informalities: the recitation "the injection openings" is unclear, because only "at least one injection opening" has been recited, without further limiting such to a plurality of injection openings. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

9. Claims 6 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, the claim depends from itself. Claim 6 will be examined as depending from claim 5, since the recitation “the annular groove” in claim 6 requires antecedent basis to “an annular groove” recited in claim 5.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 5, 6, 8, 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nylund, USPN 5,199,398.

Nylund shows a fuel injection valve (see Figures 1-3) having a valve body (2) in which a bore is embodied that is defined (on its end toward the combustion chamber of an internal combustion engine) by a valve seat (11a, 11b) at which at least one injection opening (5) originates, and having a hollow valve needle (3), which is located longitudinally displaceably in

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the bore and which has a valve sealing face on its end oriented toward the valve seat, wherein a first sealing region (10b) and a second sealing region (10a) are embodied on the valve sealing face (see Figures 2 and 3), and the hollow valve needle cooperates with the valve seat in such a way that upon contact of the hollow valve needle with the valve seat, the first sealing region upstream of the at least one injection opening and the second sealing region downstream of that injection opening effect sealing between the valve sealing face and the valve seat (see column 2, line 61 through column 3, line 4). Nylund further shows an annular groove located between the first sealing region and the second sealing region and extending all the way around the valve sealing face of the hollow valve needle, the annular groove covering the at least one injection opening (see Figures 2 and 3). Further, Nylund shows the second sealing region being formed by an edge which is embodied at the transition from the annular groove to the part of the valve sealing face located downstream of the annular groove (see Figure 3). Moreover, Nylund teaches that the second sealing region comes to rest on the valve seat before the first sealing region, upon the motion of the hollow valve needle toward the valve seat (see Figure 3; and column 3, lines 16-22).

Allowable Subject Matter

12. Claims 10-13 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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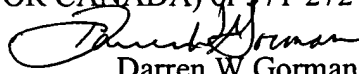
Conclusion

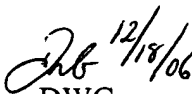
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents to Pataki et al., Greeves, Lambert et al., and Haeberer et al., and US Patent Application Publications to Kato et al., Stewart et al., and Winter et al., are cited as of interest.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Darren W Gorman
Examiner
Art Unit 3752


DWG
December 18, 2006